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STATE OF WASHINGTON
DEPARTMENT OF ECOLOGY

Northwest Region Office
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March 4, 2026

Ophélie Encelle
Senior Environmental Scientist
Seattle Public Utilities, Engineering & Technical Services Division
707 South Plummer Street
Seattle, WA 98134
(Ophelie.Encelle@seattle.gov)

**Re: Response to Comments on Block 38 West Site Delisting
(FSID 62773, CSID 15008), 520 Westlake Ave N, Seattle, W**

Dear Ophélie:

Thank you for your comments regarding the proposed removal of the Block 38 West cleanup site (Site) from the Contaminated Sites List. The public comment period for delisting this site was held from November 17 through December 16, 2025. Your comments were received via email correspondence submitted to Washington State Department of Ecology (Ecology) on December 16, 2025. Based on our review, your comments pertain to the following:

- The final cleanup action and its impacts on City of Seattle operations in the impacted right-of-way (ROW)
- Former underground storage tanks (USTs) associated with the Site and their associated impacts
- The extents of controlled density fill (CDF) that was used to backfill the former sub-grade mechanical equipment area located west-adjacent to the northern portion of the Block 38 West property
- The lateral and vertical extents of total diesel- and oil-range organics (total DRO+ORO) contamination remaining in the ROW
- The lateral and vertical extents of carcinogenic polycyclic aromatic hydrocarbon (cPAH)¹ contamination remaining in the ROW.

Ecology has reviewed and considered your comments, which include those provided in your email message and on Figures 3, 6, 7, 8, and 10 of the [December 2024 Cleanup Action Plan](#)² (2024 CAP). Your comments and our responses are provided below and are organized by the topics noted above. Comments have been numbered for the purposes of this letter. We appreciate your participation in the Model Toxics Control Act (MTCA) cleanup process at this Site.

¹ cPAH contamination discussed in this letter refers to total toxic equivalent concentrations that were calculated using the toxicity equivalency factors in MTCA Table 708-2, in accordance with WAC 173-340-708(8)(e)(iii)(A).

² <https://apps.ecology.wa.gov/cleanupsearch/document/147794>

COMMENTS REGARDING THE CLEANUP ACTION

1. *The selected remedy plan leaves contamination in the right-of-way and implements an environmental covenant. The purpose of said covenant is to impose certain restrictions on the activities and uses of the Block 38 West Property and surrounding right-of-way to protect human health, the environment, and the integrity of the interim actions completed to date at the Block 38 West Site. The covenant will remain in place until concentrations of total DRO+ORO and cPAHs decrease to levels less than the cleanup levels. City of Seattle possesses assets in the right-of-way and leaving contamination associated with the [Block 38 West - \(15008\)](#)^[3] cleanup site impacts our assets and activities.*
2. *According to the CAP, the selected cleanup action will meet action-specific requirements applicable under WAC 173 340-360(3)(b) to allow for use of institutional controls, provide financial assurances, and allow for periodic reviews of annual cap inspections. We do not see proposed solutions to contain and eliminate the potential direct contact exposure pathway for the COCs remaining in soil for utility workers (see our comment on Figure 10).*
3. *Comment on 2024 CAP Figure 10: How is this [off-property soil exposure] pathway addressed?*

Response: Ecology acknowledges that leaving contamination associated with the Block 38 West cleanup site within the City of Seattle ROW will have an impact on your assets and activities. As such, Section 7.3 of the 2024 CAP provides contingency language to address this. The contingency plan allows for potential future risk-reduction measures to be taken (by the potentially liable person) for protection of the City's assets and the activities performed by its utility workers within the impacted portion of the ROW.

In addition, Section 2.a.1 of the [Environment Covenant](#)⁴ (covenant) provides some flexibility in that it allows for additional actions to be taken in the event that any work is proposed that may temporarily compromise the cap. For example, if subsurface utility work becomes necessary within the impacted portions of the ROW, this work would require temporary removal of the cap. As such, the covenant requires the grantor (City Investors IX, L.L.C.) to submit a cap repair plan to Ecology for written approval. Within the approval letter, Ecology may require that the grantor perform additional sampling, health and safety monitoring, and/or remove additional contamination as a condition of the approval if such contamination becomes accessible. Ecology will work with the City during review of the plan to make sure that relevant factors known to the City are included.

COMMENTS REGARDING FORMER UNDERGROUND STORAGE TANKS AND ASSOCIATED IMPACTS

1. *According to the site history, there are two USTs (UST02-B2 and a 1500-gallon heating oil UST) impacting the right-of-way however it is unclear to City of Seattle what the extent of this contamination is (see our comments on Figures 3, 6, 7 and 8).*
2. *Additionally, it is unclear if the 1500-gallon heating oil UST has been removed and the surrounding soil cleaned up to current MTCA cleanup standard (see our comments on Figures 6, 7 and 8).*
3. *Comments on 2024 CAP Figures 7 and 8:*
 - a. *Are there soil data surrounding the [1,500-gallon former heating oil] UST?*
 - b. *Is there existing proof that the [1,500-gallon former heating oil] UST has been removed?*

Response: To clarify, there is only one UST ("UST02," a former 2,200-gallon bunker fuel oil UST near the northwest corner of the Block 38 West property) that has limited contamination documented to remain in

³ <https://apps.ecology.wa.gov/cleanupsearch/site/15008>

⁴ <https://apps.ecology.wa.gov/cleanupsearch/document/160941>

the ROW. Please see our responses to other comments (provided below) pertaining to the extent of residual contamination associated with UST02.

As noted in Section 3.1 of the [December 2024 Remedial Investigation and Focused Feasibility Study](#)⁵ (2024 RI/FFS), the 1,500-gallon former heating oil UST was documented to be removed in 1989 and a subsequent investigation performed by Dames & Moore in 1994 indicated that no impacts were present from that tank. Additional information can be found in Hart Crowser's [Preliminary Environmental Assessment Update](#)⁶ dated April 5, 1999. While nearby soil samples collected during the recent Block 38 West RI indicated no apparent impacts in this area of the site, the 2024 CAP allows for contingency actions to be taken if any impacts are observed during future ground-intrusive work in the ROW.

COMMENTS REGARDING CDF EXTENTS

1. Comments on 2024 CAP Figures 3, 7, and 8:
 - a. *Is it possible to have a cross-section showing the CDF and contamination extent in the Westlake Avenue North ROW?*
 - b. *What is the lateral and vertical extents of the CDF?*

Response: Figure 22 from the 2024 RI/FFS provides a cross-sectional view (Cross Section F-F') showing the CDF and extents of contamination in the Westlake Avenue North ROW in the vicinity of the former mechanical equipment room. A copy of this figure is enclosed with this letter as Attachment A. Based on the information shown in Figure 22 and provided within the 2024 RI/FFS, the CDF extended approximately 15 feet east-west by approximately 60 feet north-south and was reportedly observed to a depth of approximately 15 feet below the ground surface (bgs), which corresponds to an elevation of approximately 17.5 feet relative to the North American Vertical Datum of 1988 (NAVD88). However, other documentation prepared for this Site (Attachment B) indicates that the CDF was placed to a depth of approximately 10 feet bgs (22.5 feet NAVD88).

COMMENTS REGARDING TOTAL DRO+ORO EXTENTS

1. Comments on 2024 CAP Figure 7:
 - a. *What is the lateral extent of DRO+ORO toward the west?*
 - b. *Are there confirmation samples at the CDF limits?*

Response: This is referring to the total DRO+ORO contamination remaining in soil at concentrations above the cleanup level of 2,000 milligrams per kilogram (mg/kg) along the northwest property boundary adjacent to the Westlake Avenue North ROW. This contamination is associated with releases from former UST02 and the product line that was damaged during the recent property redevelopment. The lateral extent of total DRO+ORO contamination is bounded to the west by boring FB-17, to the northwest by N1-WSW3, and the south and southwest by M1-WSW2 and MW-95, respectively. Lateral delineation is also demonstrated to the north at boring FB-20. These locations and their data are shown on 2024 CAP Figure 7 and were determined by Ecology to provide sufficient lateral delineation during the RI. Additional information regarding risk to human health, specifically that of potential City of Seattle workers in the ROW, is provided at the end of this letter.

⁵ <https://apps.ecology.wa.gov/cleanupsearch/document/147811>

⁶ <https://apps.ecology.wa.gov/cleanupsearch/document/167439>

COMMENTS REGARDING cPAH EXTENTS

1. Comments on 2024 CAP Figures 6 and 8:

- a. *What is the lateral extent of cPAHs toward the west, north and south [at the north end of the alley]?*
- b. *What is the lateral and vertical extent of cPAHs toward the west [near the northwest corner of the Block 38 West property boundary]?*
- c. *Are there confirmation samples at the CDF limits?*

Response: Delineation of cPAHs at these areas was limited during the RI. As noted in Section 7.1 of the 2024 RI/FFS, the lateral extent of cPAHs is not defined further within the ROW due to the presence of contamination in regional fill. Contaminated fill within the South Lake Union area has been documented in reports prepared for other cleanup sites, including the following:

- [Broad Street Alignment Contaminated Fill \(CSID 15446, FSID 26292\)](#)⁷
- [Seattle DOT Mercer Parcels \(CSID 14784, FSID 27913\)](#)⁸
- [IRIS Holding LLC \(CSID 758, FSID 2593\)](#).⁹

Elevated cPAHs in soil were observed beyond the limits of any hydrocarbon release associated with Block 38 West. Based on the Block 38 West data, residual concentrations of cPAHs are present in fill soil that remains in the Westlake Avenue North, Mercer Street, and Republican Street ROWs and in the alley area of the Block 38 West Site. Confirmation samples representing cPAH conditions at/near the CDF limits include the following sampling locations: borings FB-17 and FB-20, and excavation sidewall samples M1-WSW, M1-WSW2, and N1-WSW. Additional information regarding risk to human health, specifically that of potential City of Seattle workers in the ROW, is provided in the following section.

EVALUATION OF RISKS TO RIGHT OF WAY WORKERS

Given the remaining DRO+ORO and cPAH contamination in the ROWs surrounding this site, Ecology has evaluated potential risks to City of Seattle ROW workers who may perform ground-intrusive activities within the impacted areas. This included an evaluation of four different scenarios:

- **Scenario A:** Based on using MTCA Standard Method C; assumes an industrial target cancer risk of 10^{-5} and working within contaminated soil areas 20% of the time.
- **Scenario B:** Based on using MTCA Standard Method C; assumes an industrial target cancer risk of 10^{-5} and working within contaminated soil areas 100% of the time.
- **Scenario C:** Based on using MTCA Standard Method B; assumes a residential/commercial target cancer risk of 10^{-6} and working within contaminated soil areas 20% of the time.
- **Scenario D:** Based on using MTCA Standard Method B; assumes a residential/commercial target cancer risk of 10^{-6} and working within contaminated soil areas 100% of the time.

Standard Method B is based on a child exposed in a residential scenario. Note that the Method B cPAH cleanup level value of 0.19 mg/kg incorporates an adjustment for age-specific early life exposures to mutagenic chemicals, as explained in Ecology's [2021 PAH memo](#).¹⁰ Standard Method C is based on adult exposure in an industrial scenario. The percentages (20% and 100%) for these scenarios are based on the

⁷ <https://apps.ecology.wa.gov/cleanupsearch/site/15446>

⁸ <https://apps.ecology.wa.gov/cleanupsearch/site/14784>

⁹ <https://apps.ecology.wa.gov/cleanupsearch/site/758>

¹⁰ https://www.ezview.wa.gov/Portals/_1987/Documents/Documents/MTCA_PAHCleanupLevels.pdf

amount of time that a worker could potentially be working in a contaminated ROW. 20% was derived based on Ecology's review of the number of known contaminated sites in the South Lake Union area and assumptions about the potential for each site to impact an adjacent ROW. More information on this can be found in Attachment C.¹¹ 100% is the worst case scenario, where a worker is only working in contaminated areas all the time.

A summary evaluation of these scenarios is provided in Attachment D. Based on the evaluation, the following table shows the concentrations of cPAHs and total DRO+ORO that are considered protective of human health for workers in the ROW in the vicinity of this Site:

Concentrations Protective of Workers in Road Rights-of-Way

Scenario	Target Cancer Risk (Unitless)	Percentage of Time Working in Contaminated Soils	Protective Concentration of cPAHs (mg/kg)	Protective Concentration of DRO+ORO (mg/kg)
A	10 ⁻⁵	20%	1,050	232,000
B	10 ⁻⁵	100%	210	46,400
C	10 ⁻⁶	20%	105	23,200
D	10 ⁻⁶	100%	21	4,640

The data shown on 2024 CAP Figures 7 and 8, copies of which are included in Attachment D, indicate the following:

- The majority of remaining total DRO+ORO concentrations are less than the most conservative level of 4,640 mg/kg (Scenario D). Only 3 locations exceed that value:
 - Sample W-3 (collected in 1993 near the northeast corner of the alley) contained total DRO+ORO at 8,080 mg/kg at elevation 10.5 ft NAVD88.
 - Alley excavation sidewall sample G/A5-ESW contained total DRO+ORO at 7,040 mg/kg at elevation 17.5 ft NAVD88.
 - Block 38 West property excavation sidewall sample N1-WSW contained total DRO+ORO at 23,800 mg/kg at elevation 17 ft NAVD88. This concentration also slightly exceeds the second most conservative level of 23,200 mg/kg.
- The majority of remaining cPAH concentrations are less than the most conservative level of 21 mg/kg (Scenario D). Only 2 locations exceed that value:
 - Sidewall sample EX-40-EL22 (collected in 2008 along east side of the alley) contained cPAHs at 25 mg/kg at elevation 22 ft NAVD88.
 - Alley excavation sidewall sample I/A5-ESW contained cPAHs at 150 mg/kg at elevation 17.5 ft NAVD88. This concentration also exceeds the second most conservative level of 105 mg/kg.

¹¹ Attachment C contains pages from an internal Ecology Toxics Cleanup Program memorandum dated March 15, 2023. The memo was prepared by Ecology toxicologist, Priscilla Tomlinson, for use by Ecology's South Lake Union Group located in the Northwest Regional Office. The subject of the memo is "Air, soil gas, and groundwater remediation levels for vapor intrusion in commercial and excavation areas." While the purpose of the memo is to provide risk-based remediation levels for vapor intrusion, it contains relevant information about the percentage of time a ROW worker is expected to work within a contaminated ROW.

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- None of the remaining cPAH and DRO+ORO concentrations exceed the ROW worker scenario levels based on a cancer risk of 10^{-5} .

Based on this analysis, while some of these concentrations are not safe for residential exposures, the risk level is low for someone working in these areas around the Block 38 West property where cPAHs and total DRO+ORO contamination is still present. Please let me know if you have any questions or concerns regarding this risk evaluation.

CLOSING

Thank you for taking the time to comment. If you have any questions or concerns regarding the contents of this letter and its attachments, please contact me at Tena.Seeds@ecy.wa.gov or by phone at (425) 457-3143.

Sincerely,



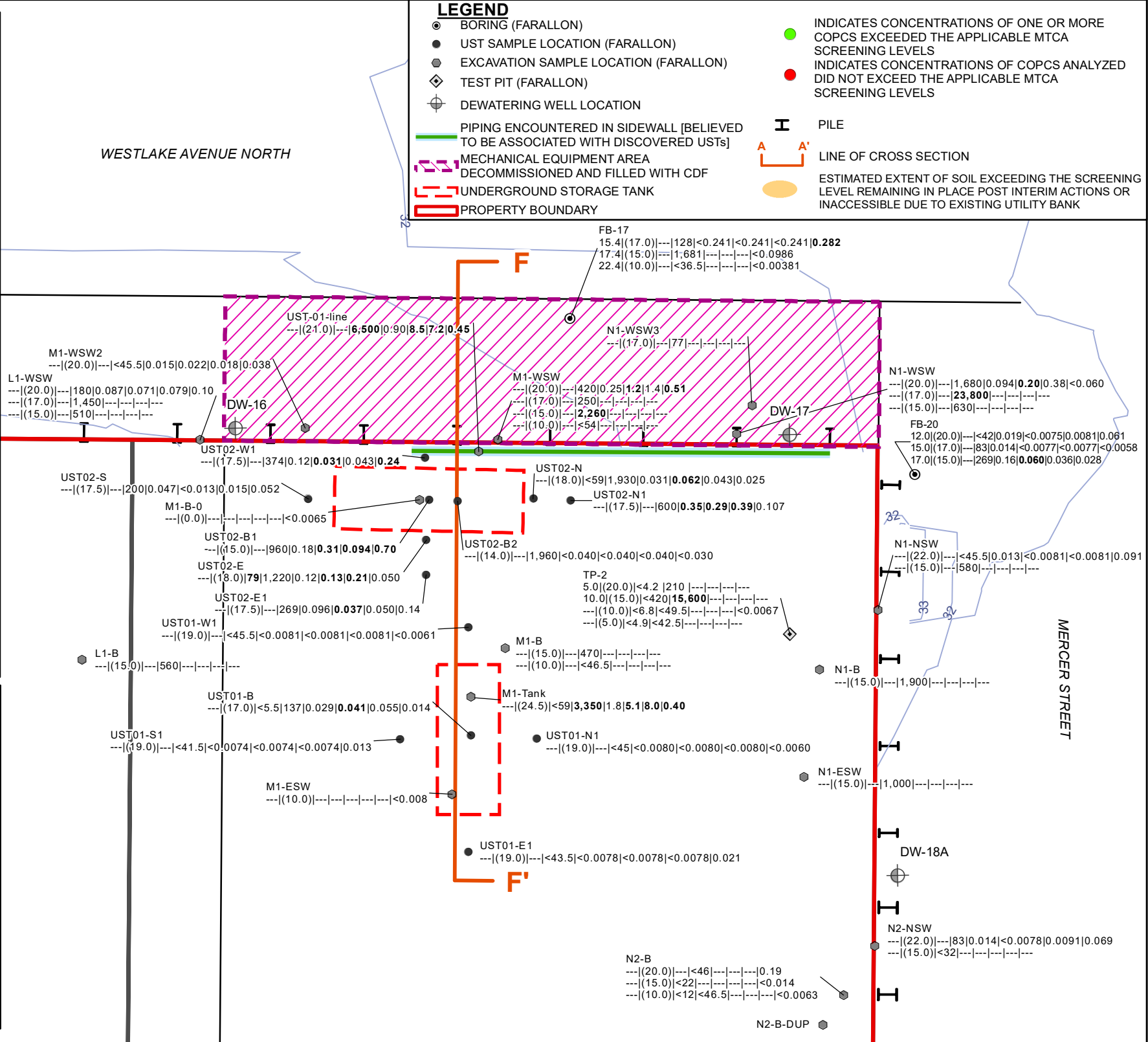
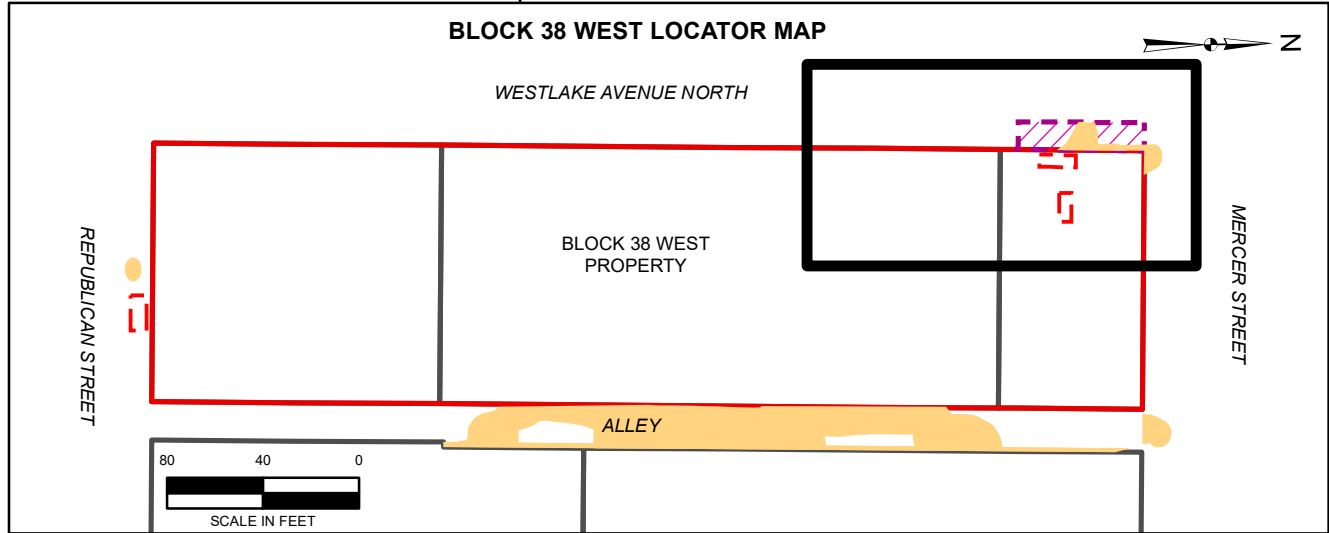
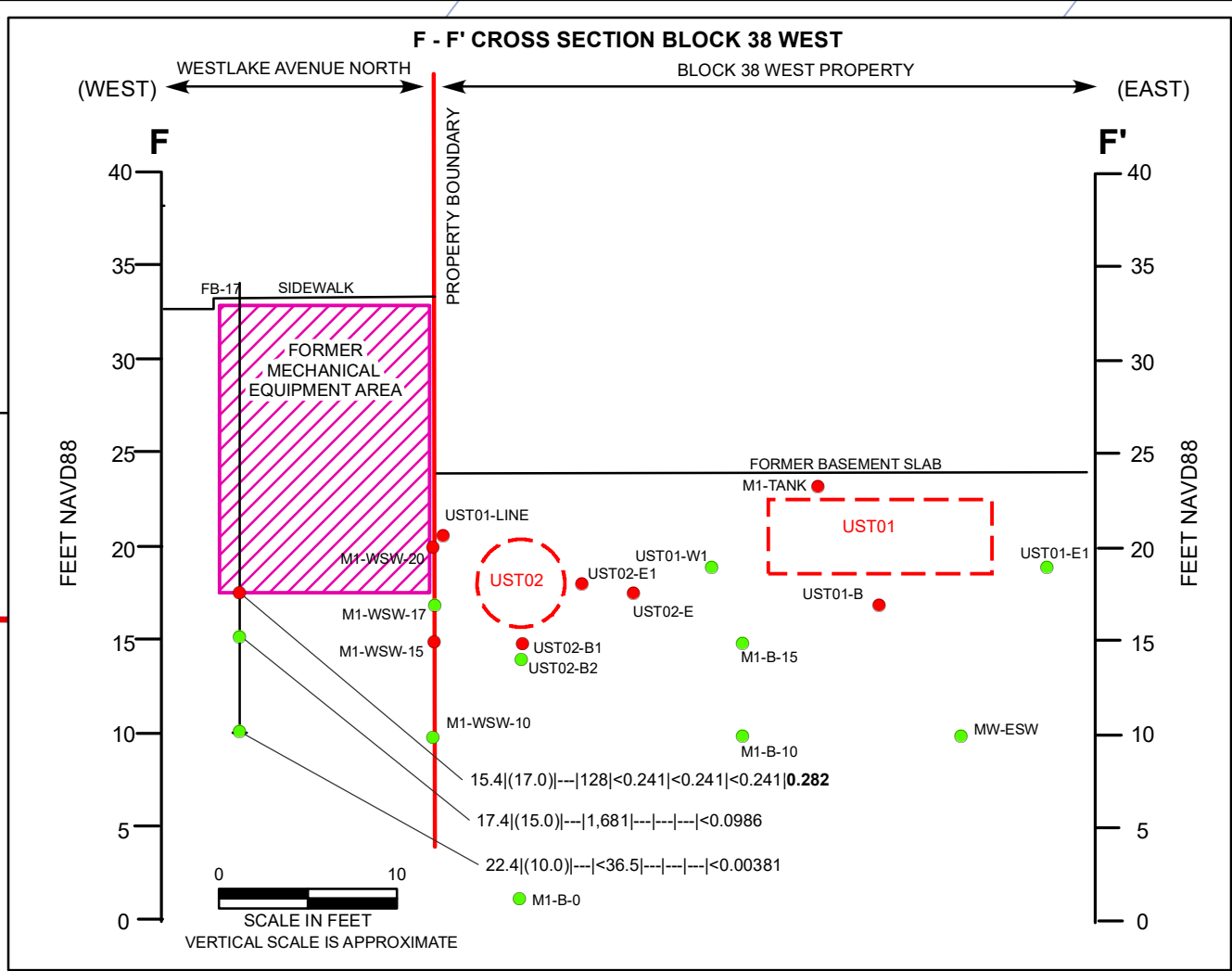
Tena Seeds, PE
Cleanup Project Manager
Toxics Cleanup Program, NWRO

Enclosures: Attachment A – 2024 RI/FFS Figure 22
 Attachment B – Block 38 West construction plans and FB-17 boring log
 Attachment C – Excerpt from March 15, 2023 Ecology memorandum regarding vapor
 intrusion remediation levels in commercial and excavation scenarios
 Attachment D – Right-of-Way Worker Risk Evaluation Tables

cc: Jill Macik – Seattle Dept. of Transportation (Jill.Macik@seattle.gov)
 Katherine Chesick – Seattle Dept. of Transportation (Katherine.Chesick@seattle.gov)
 Corey Wilson – City Investors IX, L.L.C. (CoreyW@vulcan.com)
 Suzy Stumpf – Farallon Consulting ([sstumpf@farallonconsulting.com](mailto:ssumpf@farallonconsulting.com))
 Augie Nuszer – Ecology (Augie.Nuszer@ecy.wa.gov)
 Dhroov Shivjiani – Ecology (Dhroov.Shivjiani@ecy.wa.gov)
 Kim Wooten – Ecology (Kim.Wooten@ecy.wa.gov)
 Victoria Banks – Office of the Attorney General (Victoria.Banks@atg.wa.gov)

ATTACHMENT A

2024 RI/FFS Figure 22 – Soil Analytical Results for UST Decommissioning



NOTES:

ANALYTICAL RESULTS IN MILLIGRAMS PER KILOGRAM (mg/kg)

SAMPLE DEPTH AND CONCENTRATIONS REPORTED AS:

DEPTH | (ELEVATION IN FEET NAVD88) | GRO | DRO+ORO

| NAPHTHALENE | 1-METHYLNAPHTHALENE |

2-METHYLNAPHTHALENE | cPAH TEC

ELEVATION DATA PRESENTED IN FEET ABOVE MEAN SEA LEVEL IN THE NORTH AMERICAN VERTICAL DATUM OF 1988 (NAVD88)

ELEVATION SOURCE: BUSH, ROED, & HITCHINGS, INC. (2014)

DATA IS ONLY SHOWN FOR PERFORMANCE AND COMPLIANCE SAMPLES THAT REMAIN IN PLACE. NO SOIL DATA STRINGS ARE SHOWN FOR SAMPLES THAT WERE REMOVED. RED HIGHLIGHTS INDICATE THE SOIL DATA EXCEEDED APPLICABLE RI SCREENING LEVELS AND GREEN HIGHLIGHTS INDICATE THE SOIL DATA WAS LESS THAN THE APPLICABLE RI SCREENING LEVEL.

BOLD = DENOTES CONCENTRATIONS THAT EXCEED APPLICABLE SCREENING LEVELS

< = DENOTES ANALYTE NOT DETECTED AT OR EXCEEDING THE REPORTING LIMIT LISTED

--- = DENOTES SAMPLE NOT ANALYZED OR NOT APPLICABLE

cPAH = CARCINOGENIC POLYCYCLIC AROMATIC HYDROCARBONS

TEC = TOXICITY EQUIVALENT CONCENTRATION

DRO = TOTAL PETROLEUM HYDROCARBONS (TPH) AS DIESEL-RANGE ORGANICS

ORO = TPH AS OIL-RANGE ORGANICS

GRO = TPH AS GASOLINE-RANGE ORGANICS

DRO+ORO = SUM OF DRO AND ORO

MTCA = WASHINGTON STATE MODEL TOXICS CONTROL ACT CLEANUP REGULATION

CDF = CONTROLLED DENSITY FILL

UST = UNDERGROUND STORAGE TANK

ANALYTE	SCREENING LEVEL	
	VADOSE	SATURATED
GRO	30	30
DRO+ORO	2,000	2,000
NAPHTHALENE	4.5	0.24
1-METHYLNAPHTHALENE	0.082	0.0067
2-METHYLNAPHTHALENE	1.7	0.088
cPAH TEC	0.19	0.19

ALL LOCATIONS ARE APPROXIMATE. FIGURES WERE PRODUCED IN COLOR. GRAYSCALE COPIES MAY NOT REPRODUCE ALL ORIGINAL INFORMATION.



Drawn By: chartman

Checked By: SS

Date: 6/21/2024

Disc Reference: Q:\Projects\397_VULCAN\019_Block38\Mapfiles\17G_2023-07\2024_Update\Figure-22_UST_Decom.mxd

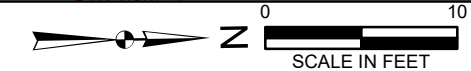


FIGURE 22

SOIL ANALYTICAL RESULTS FOR

UST DECOMMISSIONING

BLOCK 38 WEST SITE

SEATTLE, WASHINGTON

FARALLON PN: 397-019

ATTACHMENT B

Block 38 West Construction Plans and FB-17 Boring Log

Client: City Investors IX LLC

Project: Block 38 West

Location: Seattle, WA

Farallon PN: 397-019

Logged By: A. Osman

Reviewed By: Y. Pehlivan

Date/Time Started: 5/9/23 @ 1159

Date/Time Completed: 5/9/23 @ 1227

Drilling Company: AEC

Drilling Method: Sonic

Drilling Equipment: D101

Drilling Operator: John Wright

Sampler Type: 5.0' PE Bags

Depth to Water ATD (ft bgs): 22.5

Boring Diameter (in): 3.75

Total Boring Depth (ft bgs): 25.0

Depth (ft bgs)	Sample Interval	Lithologic Description	USCS	USCS Graphic	Water Level	% Recovery	PID (ppmv)	Sample ID	Sample Analyzed
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0	0.0-3.0':	Airknife to 3.0' bgs for utilities. Soil not logged.				100			
5	3.0-10.0':	Controlled Density Fill.	FILL						
10	10.0-15.0':	No Recovery.				30			
15	15.0-16.0':	Silty SAND (55% sand, 35% silt, 10% gravel), fine to medium sand, fine gravel, gray-brown, dry, no odor, no staining. Concrete debris.	FILL						
	16.0-17.0':	Poorly graded SAND with silt (75% sand, 15% silt, 10% gravel), fine sand, fine and coarse gravel, brown, dry, no odor, no staining.	FILL				0.9	FB-17-17.0	X
	17.0-18.0':	SILT (90% silt, 5% sand, 5% gravel), gray, dry, no odor, no staining. Brick debris, wood debris.	FILL				1.0	FB-17-15.0	X
20	18.0-20.0':	No Recovery.							
	20.0-22.5':	PEAT (90% peat, 10% silt), dark brown, moist, strong sulfur-like odor, no staining.	FILL			100			
	22.5-25.0':	SILT with sand (85% silt, 15% sand), gray, fine sand, wet, no odor, no staining.	FILL				0.5	FB-17-10.0	X
25									

Completion Information

Temporary Well Casing Diameter (in): NA

Temporary Well Screened Interval (ft bgs): NA

Boring Abandonment: NA

Surface Seal: NA

Ground Surface Elevation (ft): 32.43

Surveyed Location: X: 1269316.42 **Y:** 231376.97

1. EXISTING UTILITIES AND UNDERGROUND STRUCTURES SHOWN ON THE PLAN ARE BASED UPON THE BEST AVAILABLE PUBLIC RECORDS AND/OR PRIVATE RECORDS AS SUPPLIED BY THE PROJECT OWNER AND/OR DATA OBTAINED VERIFIED BY OWNERS OR OFFICIALS ASSOCIATED WITH THE PARTICULAR UTILITY. NEITHER THE OWNER NOR THE ENGINEER SHALL BE RESPONSIBLE FOR THE ACCURACY OF ANY UTILITIES OR UNDERGROUND FACILITIES NOT SHOWN ON THE DRAWINGS OF THIS INFORMATION AND ASSUME NO RESPONSIBILITY FOR THE WORK. ALL INVERT ELEVATIONS SHOWN ON THE DRAWINGS SHALL PROPER LOCATIONS ON THE CONSTRUCTION PLANS, MAY BE ENCOUNTERED DURING THE COURSE BE VERIFIED BY THE CONTRACTOR PRIOR TO CONSTRUCTION.
2. IF CHANGED CONDITIONS ARE ENCOUNTERED, THE CONTRACTOR SHALL NOTIFY THE ENGINEER PROMPTLY OF A PRE-EXISTING SUBSURFACE CONDITION DIFFERING FROM INDICATIONS IN THE PLANS, OR OF AN UNUSUAL, UNKNOWN, SUSPICIOUSLY DAMAGED, OR AN UNUSUAL NATURE, DIFFERING MATERIALLY FROM THOSE ORIGINALLY ENCOUNTERED AND GENERALLY RECOGNIZED AS INHERENT IN THE WORK OF THE CHARACTER PROVIDED FOR IN THE CONTRACT. THE CONTRACTOR AND/OR OWNER SHALL MAKE NO CLAIMS TO THE ENGINEER FOR COMPENSATION FOR TIME OR WORK RESULTING FROM CHANGED CONDITIONS UNLESS THE ENGINEER HAS APPROVED THE WORK IN WRITING.
3. THE CONTRACTOR SHALL CALL THE UTILITIES UNDERGROUND LOCATION CENTER FOR FIELD LOCATION OF ALL UTILITIES BEING EXCAVATION UNTIL ALL KNOWN UNDERGROUND FACILITIES IN THE VICINITY OF THE PROPOSED WORK HAVE BEEN LOCATED AND SHALL NOT MARKED. IF THE UTILITY IS NOT A SUBSCRIBER OF THE UNDERGROUND LOCATION CENTER THEN THE CONTRACTOR SHALL GIVE NOTICE TO THAT UTILITY.
4. THE CONTRACTOR IS RESPONSIBLE FOR REVIEW OF ALL UTILITY PURVEYOR, AND CITY OR STATE RECORDS RELATIVE TO THE EXISTING UNDERGROUND UTILITIES. THE CONTRACTOR IS RESPONSIBLE FOR AVOIDING DAMAGE TO THESE FACILITIES AND SHALL RESTORE ALL UTILITIES AT CONTRACTOR'S OWN EXPENSE.
5. VERIFY THAT ALL UTILITY SERVICES TO BE DEMOLISHED HAVE BEEN DISCONNECTED.
6. ERECT BARRIERS, SHORING AND THE LIKE TO PROTECT PERSONNEL, CONSTRUCTION AND VEGETATION TO REMAIN. COMPLY WITH ALL STATE AND LOCAL AGENCY REQUIREMENTS.
7. DO NOT SHUT OFF OR CAP UTILITIES WITHOUT PRIOR NOTICE. COORDINATE WORK WITH LOCAL UTILITY PURVEYORS.
8. MAINTAIN VEGETATION AND PEDESTRIAN TRAFFIC ROUTES: ENSURE MINIMUM INTERFERENCE WITH ROADS, STREETS, SIDEWALKS, AND ADJACENT FACILITIES; DO NOT CLOSE OR OBSTRUCT STREETS, SIDEWALKS, OR PASSAGeways WITH PERMISSION FROM AUTHORITIES HAVING JURISDICTION; MAINTAIN FREE ACCESS ALONG ROAD AT ALL TIMES; MEET ALL APPLICABLE CODES AND ORDINANCES.
9. PROTECT FROM HARM ANY TREES, OR OTHER OBJECTS SELECTED TO REMAIN.
10. RESTORE ANY IMPROVEMENTS DAMAGED BY THIS WORK TO THEIR ORIGINAL CONDITION, AS ACCEPTABLE TO OWNER. REPAIR ANY DAMAGE TO ADJACENT STRUCTURES, UTILITIES, SITE, AND WORK OF THIS CONTRACT TO REMAIN AT AN ADDITIONAL COST AS NECESSARY.
11. SPRINKLE DEBRIS TO NECESSARY TO LIMIT DUST TO MOSTLY PRACTICABLE LEVEL. DO NOT SPRINKLE TO EXTENT THAT WOULD CAUSE FLOODING, CONTAMINATED RUNOFF, OR ICING.
12. REMOVE EXISTING ABOVE-GRADE AND BELOW-GRADE IMPROVEMENTS AS INDICATED AND AS NECESSARY TO FACILITATE NEW CONSTRUCTION. CARE SHALL BE TAKEN THAT DAMAGE DOES NOT OCCUR TO EXISTING PAVEMENT WHICH IS NOT TO BE REMOVED AND THAT THE EXISTING PAVEMENT SURFACE IS ACCOMPISHED BY MAKING A NEAREST PAVEMENT SAW CUT AT THE BOUNDARIES OF THE AREA TO BE REMOVED.

13. THE CONTRACTOR WILL BE RESPONSIBLE FOR FURNISHING, SETTING AND MARKING ALL LINE AND LOCATION STAKES, INCLUDING OFFSETS AND GENERAL CONSTRUCTION STAKING, WHEN WORK REQUIRING CONTROL IS BEING PERFORMED. ALL NECESSARY RELATED EQUIPMENT, SUPPLIES AND INSTRUMENTS SHALL BE ON SITE. A QUALIFIED LAYOUT ENGINEER, SURVEYOR, OR TECHNICAL SPECIALIST MUST BE ASSIGNED TO THE CONTRACTOR'S CREW FOR THE PURPOSE. THIS EQUIPMENT AND PERSONNEL MUST BE AVAILABLE AT NO ADDITIONAL COST TO OWNER FOR THE PURPOSE OF VERIFYING LAYOUT AND CERTIFYING THE ACCURACY OF WORK ON THE SITE.
14. TRAFFIC: DO NOT OBSTRUCT WALKS OR PUBLIC WAYS WITHOUT THE WRITTEN PERMISSION OF GOVERNING AUTHORITIES AND OF THE OWNER. WHERE ROUTES ARE PERMITTED TO BE CLOSED, PROVIDE ALTERNATE ROUTES IF REQUIRED.
15. THE CONTRACTOR IS RESPONSIBLE FOR PRESERVING ALL BENCHMARKS AND STAKES AND THE REPLACEMENT OF ANY THAT ARE DISPLACED OR MISSING.
16. THE REFUSE RESULTING FROM CLEARING AND GRUBBING SHALL BE DISPOSED OF BY THE CONTRACTOR IN A MANNER CONSISTENT WITH ALL GOVERNMENT REGULATIONS, IN NO CASE SHALL REFUSE MATERIAL BE LEFT ON THE PROJECT SITE, SHOWED OUTDUT ABUTTING PRIVATE PROPERTIES, OR BE BURIED IN EMBANKMENTS OR TRENCHES ON THE PROJECT SITE. DEBRIS SHALL NOT BE DEPOSITED IN ANY STREAM OR BAY OF WATER, NEILAND, OR IN ANY OTHER UNLAWFULLY LOCATED OR UNLAWFULLY OWNED PRIVATE PROPERTY. OBTAINED BY WRITTEN CONSENT OF THE PRIVATE PROPERTY OWNER. MAINTAIN HAULING ROUTES CLEAN AND FREE OF ANY DEBRIS RESULTING FROM DEMOLITION WORK ON THIS PROJECT.
17. CONTRACTOR TO MAINTAIN PEDESTRIAN ACCESS ALONG 34TH AVE N, REPUBLICAN ST AND HARRISON ST. COORDINATE USE PERMITS W/ SDO.
18. CONTRACTOR TO COORDINATE SIDEWALK CLOSURES W/ SDO.
19. ALL ELEC. SERVICE REMOVAL SHALL BE COORDINATED WITH SEATTLE CITY LIGHT (SCL) AND RELEVANT COMMUNICATIONS PROVIDERS.

ALL EXISTING WATER SERVICES TO THE PROPERTY WHICH ARE TO BE RETIRED SHALL BE RETIRED BY SPW CROWDS AT THE EXPENSE OF THE OWNER. SPW WILL POTHOLE AT THE CONNECTION TO THE MAIN IN THE RIGHT OF WAY, DISCONNECT THE SERVICE, PROVIDE ANY NECESSARY REPAIRS TO THE MAIN, AND BACKFILL AND COMPACT THE EXCAVATION TO SUB-BASE OF ADJACENT PAVING. SPW WILL REMOVE THE METER BOX AND BACKFILL THE VOID TO SUB-BASE. THE CONTRACTOR IS RESPONSIBLE FOR ALL RESTORATION OF THE RIGHT OF WAY, PER CITY OF SEATTLE STANDARDS, RESULTING FROM THE RETIREMENT OF EXISTING WATER SERVICES BY SPW. RESTORATION OF THE RIGHT OF WAY INCLUDES ALL IMPROVEMENTS ABOVE AND INCLUSIVE OF BASE COURSE WHICH INCLUDES, BUT IS NOT LIMITED TO, PAVING, CURBS AND GUTTERS, BASE COURSE, AND PAVEMENT STRIPING.

PARCEL A:
LOTS 8, 10, 11, 12 AND 13, BLOCK 94, DAVID T. DENNY'S FIRST ADDITION TO NORTH SEATTLE, ACCORDING TO THE PLAT THEREOF RECORDED IN VOLUME 1 OF PLATS, PAGE 79, IN KING COUNTY, WASHINGTON;

EXCEPT THE NORTH 7.36 FEET OF SAID LOT 13;
AND EXCEPT THE WEST 12 FEET THEREOF HERETOFORE CONDEMNED IN KING COUNTY SUPERIOR COURT CAUSE NO. 47549 FOR WIDENING OF WESTLAKE AVENUE NORTH, AS PROVIDED BY ORDINANCE NO. 12023 OF THE CITY OF SEATTLE.

PARCEL B:
LOTS 8 AND 9, BLOCK 94, DAVID T. DENNY'S FIRST ADDITION TO NORTH SEATTLE, ACCORDING TO THE PLAT THEREOF RECORDED IN VOLUME 1 OF PLATS, PAGE 79, IN KING COUNTY, WASHINGTON;

EXCEPT THE WEST 12 FEET THEREOF HERETOFORE CONDEMNED IN KING COUNTY SUPERIOR COURT CAUSE NO. 47549 FOR WIDENING OF WESTLAKE AVENUE NORTH, AS PROVIDED BY ORDINANCE NO. 12023 OF THE CITY OF SEATTLE.

PARCEL C:
THE NORTH 7.36 FEET OF LOT 13 AND ALL OF LOT 14, BLOCK 94, DAVID T. DENNY'S FIRST ADDITION TO NORTH SEATTLE, ACCORDING TO THE PLAT THEREOF RECORDED IN VOLUME 1 OF PLATS, PAGE 79, IN KING COUNTY, WASHINGTON;

EXCEPT THE NORTH 11.36 FEET OF SAID LOT 14; ALSO EXCEPT THE WEST 12 FEET OF SAID LOTS 13 AND 14, AS CONDEMNED IN KING COUNTY SUPERIOR COURT CAUSE NO. 47549, FOR WIDENING OF WESTLAKE AVENUE NORTH, AS PROVIDED BY ORDINANCE NO. 12023 OF CITY OF SEATTLE.

VERTICAL DATUM: NAVD88
VERTICAL BENCHMARKS:

OWNER: CITY OF SEATTLE
ID#: SNV-5181
DESCRIPTION: BRASS CAP
LOCATION: INTERSECTION OF BACK OF WALKS, SE QUADRANT OF
VALLEY ST & DEXTER AVE N
ELEVATION: 57.77'
OWNER: CITY OF SEATTLE

ID#: SNV-5177
DESCRIPTION: BRASS CAP
LOCATION: INTERSECTION OF BACK OF WALKS, NW QUADRANT OF
ST & 2ND AVE W
ELEVATION: 132.99'

HORIZONTAL DATUM: NAD 83/91
HORIZONTAL BENCHMARKS:

OWNER: CITY OF SEATTLE
DESCRIPTION: 1/4" BRASS ROD IN 4X4 CONC CASE, DN 0.7
LOCATION: INTERSECTION OF VALLEY ST & FAIRVIEW AVE
231874.47
EASTING: 1270313.60

OWNER: CITY OF SEATTLE
DESCRIPTION: 1/4" BRASS ROD IN 4X4 CONC CASE, DN 0.9
LOCATION: INTERSECTION OF VALLEY ST & BOREN AVE
231883.91
EASTING: 1269937.80

TAX ACCOUNT NO(S):
198320-0170-09
198320-0180-07
198320-0196-09

VULCAN
505 5TH AVENUE S. SUITE 900
SEATTLE, WA 98104-3891
PHONE: (206) 342-2000 CONTACT: JIM BROADLICK

NBBJ
223 YALE AVENUE N
SEATTLE, WA 98109
PHONE: (206) 223-5222 CONTACT: ROSS LEVENTHAL

Engineer

COUGHLIN PORTER LUNDEEN
413 PINE STREET, SUITE 300
SEATTLE, WA 98101
PHONE (206) 343-0460
CONTACT: JEFF PETERSON, P.E.

COUGHLIN PORTER LUNDEEN
413 PINE STREET, SUITE 300
SEATTLE, WA 98101
PHONE: (206) 343-0460
CONTACT: JEFF PETERSON, P.E.

Surveyor

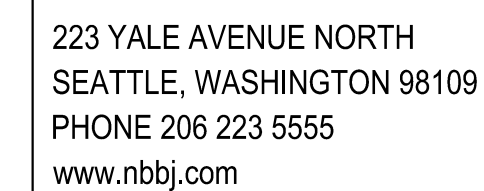
BUSH ROED & HITCHINGS
2009 MINOR AVENUE EAST
SEATTLE, WA 98102
PHONE: (206) 323-4144 CONTACT: DARRELL NANCY

BUSH ROED & HITCHINGS
2009 MINOR AVENUE EAST
SEATTLE, WA 98102
PHONE: (206) 323-4144 CONTACT: DARRELL NANC

- C1.00 DEMOLITION PLAN
- C2.00 TESC PLAN
- C2.10 TESC DETAILS
- C2.11 DEWATERING SCHEMATIC PLAN
- C2.20 TESC SECTIONS
- C3.00 CIVIL SITE PLAN
- C3.01 FOUNDATION DRAINAGE PLAN
- C4.00 STORMWATER MITIGATION



	PROPERTY LINE
	SAWCUT LINE
	REMOVE CURBING
	REMOVE ASPHALT PAVEMENT
	REMOVE CONCRETE PAVEMENT
	DEMOLISH BUILDING
	REMOVE TREE(S)
	FENCING
	CABLE TV SERVICE
	ELECTRICAL SERVICE
	GAS MAIN/SERVICE
	GAS METER/VALVE
	SANITARY SERVICE
	SANITARY MH/CO
	STORM DRAINAGE PIPE
	YDCO/CB/CB 2MH
	TELEPHONE SERVICE
	WATER MAIN
	HF/DC/PV/VALVE
	LIMITS OF CONSTRUCTION



MEP:



**COUGHLIN
PORTER
LUNDEEN**

801 SECOND AVENUE, SUITE 900
SEATTLE, WA 98104
(206) 343-0460 www.cplinc.com

BLOCK 38

90% CD

Issue Date

[illegible]

SCALE	PROJECT ARCHITECT
-------	-------------------

As indicated	NBBJ
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PROJECT	C140025-02
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NUMBER	0110020 02

DATE	06/05/2019
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SHEET NAME

DEMOLITION BY

DEMOLITION PLAN

SHEET NUMBER

C 1.00

C-1.00

SHEET OF 250

Page 1 of 2

Call Before You Dig. 8-1-1 or 1-800-424-5555 Underground Service (USA)

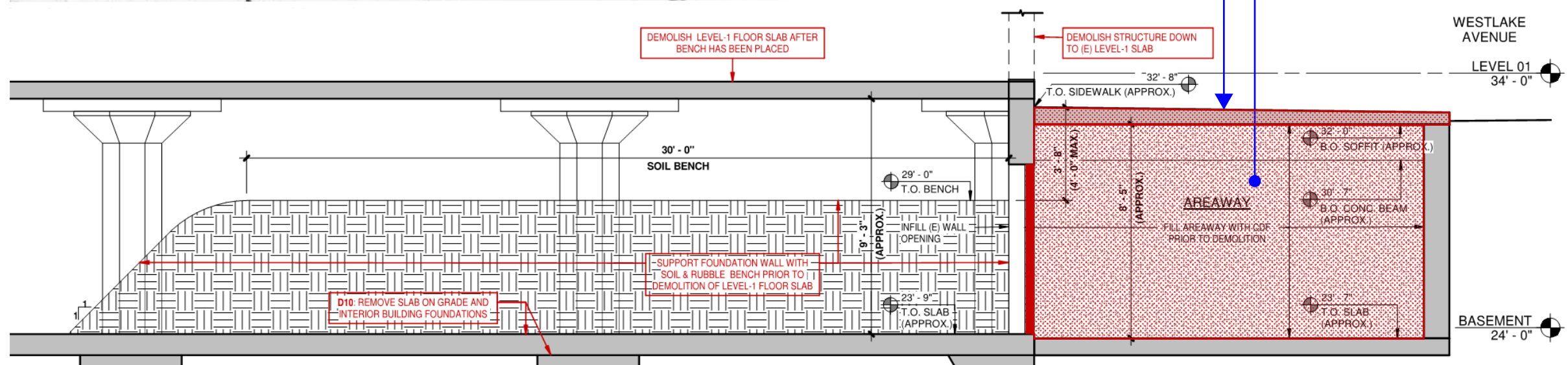
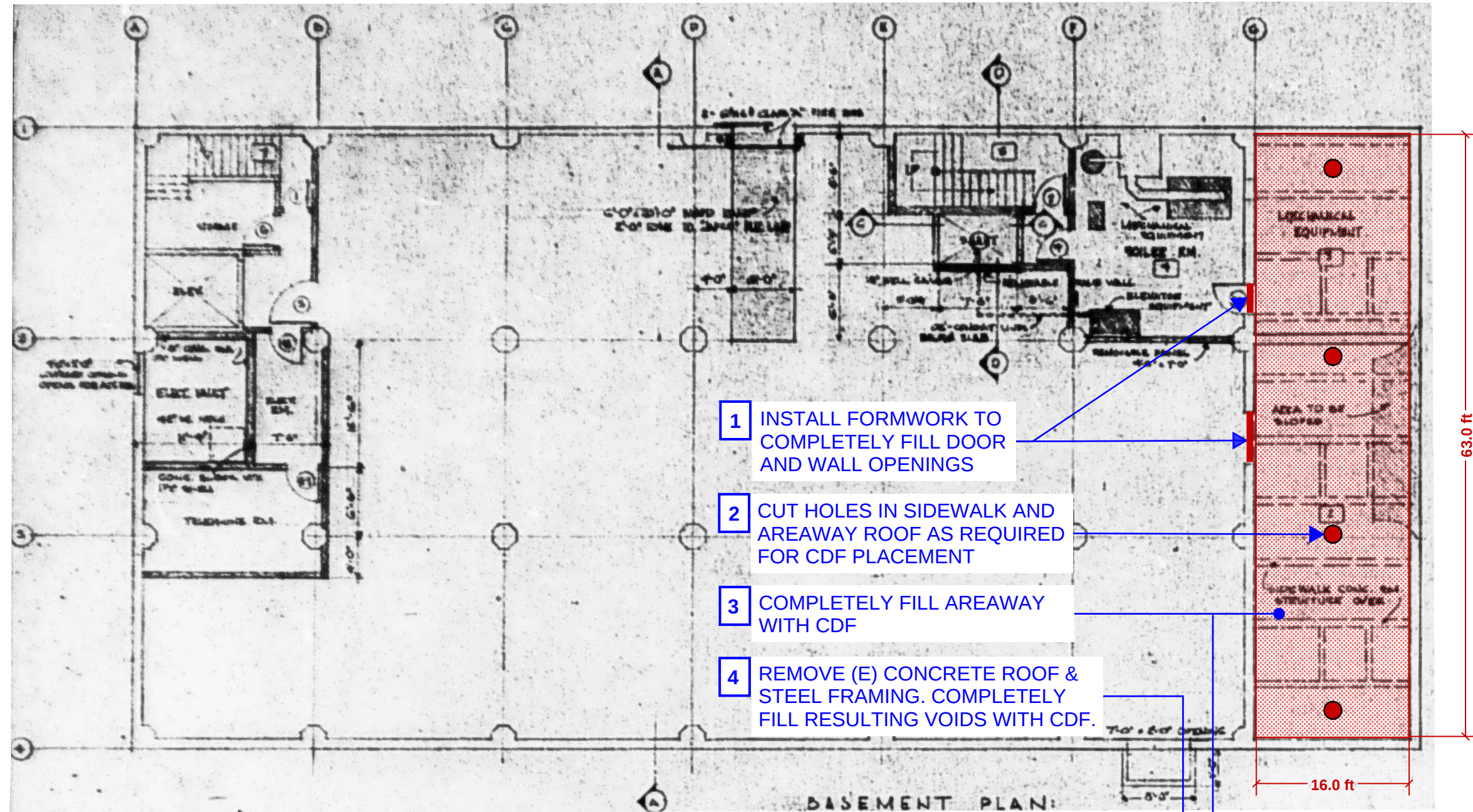
EXISTING AREAWAY BELOW
WESTLAKE AVE N SIDEWALK.
SEE PAGE 2 FOR EXTENTS OF INFILL



BLOCK 38

City Investors IX LLC
505 5th Avenue South, Suite 900
Seattle, WA 98104

AREAWAY CONSTRUCTION PLAN



ATTACHMENT C

Excerpt from March 15, 2023 Ecology Memorandum
Regarding Vapor Intrusion Remediation Levels in Commercial and Excavation Scenarios

Table 2. Target Organs for Noncancer Hazards

Chemical	Development	Eye	Immune	Liver	Nervous System
PCE		X			X
TCE	X		X		
cis-1,2-DCE	<i>No target organ listed</i>				
trans-1,2-DCE	<i>No target organ listed</i>				
Vinyl chloride				X	
Benzene			X		
Toluene					X
Ethylbenzene	X				
Total xylenes					X

Source: Cleanup Levels and Risk Calculation database (January 2023)

Roadwork Excavation RELs

Calculations for the roadwork excavation scenario are shown in Attachment B. Roadway excavation workers were assumed to have the same exposure duration as commercial workers (25 years), but they were assumed to spend 7 hours/day working within the trench. The remainder of the work day, including the lunch hour, was assumed to be spent outside the trench.

An additional adjustment to the commercial REL is necessary based on the fact that roadway workers do not work in one location throughout their careers and likely work in a combination of contaminated and uncontaminated areas. An estimated percentage of contaminated roadways was determined using information available from the SLU area.



An evaluation of the SLU area (Leidos 2017) identified 234 MTCA cleanup sites within a watershed where surface water and groundwater naturally drain to Lake Union. The total number of city blocks within the SLU watershed was estimated to be 650, based on Figure 4 of Leidos (2017).

Of the 234 cleanup sites, 122 sites have been granted no further action and 112 sites are still in the cleanup process, either awaiting cleanup or having begun cleanup. It was assumed there would be no contamination in the roadways surrounding sites granted no further action. Of the 234 cleanup sites, 53 sites had data available in the Environmental Information Management (EIM) system.

Leidos (2017) defined an exceedance based on comparing maximum site concentrations to groundwater cleanup levels based on protection of sediment. For the chemicals considered in this memo, groundwater screening levels for the vapor intrusion pathway are lower than for protection of sediment. Every site with an exceedance as defined by Leidos will also have an exceedance of a vapor intrusion screening level.

PCE, TCE, and/or vinyl chloride were analyzed at 31 cleanup sites, approximately 60 percent of the sites with data in EIM. Almost every one of the 31 sites had an exceedance for at least one of the chlorinated solvents. It was assumed that 60 percent (67 sites) of the 112 sites still in the cleanup process would have exceedances for one or more chlorinated solvents. Each of the 67 sites was assumed to impact roadways surrounding two city blocks, or a total of 134 blocks. This represents 21 percent of the SLU area.

BTEX were analyzed at 46 cleanup sites, approximately 90 percent of the sites with data in EIM. Almost every site with analyses for BTEX had an exceedance for at least one of the chemicals. It was assumed that 90 percent (101 sites) of the 112 sites still in the cleanup process would have exceedances for one or

more BTEX. Each of the 101 sites was assumed to impact roadways surrounding one city block. This represents 16 percent of the SLU area.

Chlorinated solvents and BTEX may each affect approximately 20 percent of the roadways in the SLU area. The adjustment to consider the portion of time working in contaminated areas effectively raises RELs by a factor of 5 (1/0.2).

To derive RELs for the roadway excavation scenario, the commercial RELs were adjusted as follows (Attachment B):

- Exposure frequency was adjusted from 0.26 to 0.20 (35 hours/week for 50 weeks/year)
- Portion of time working in contaminated areas was set to 0.20.

The short-term action levels for TCE were adjusted from the commercial scenario to reflect the 35 hour/week exposure frequency (Attachment C). They were not adjusted for the portion of time working in contaminated areas because it is possible that the roadway excavation worker could be working within an individual contaminated area throughout the entire critical three-week window of pregnancy. The short-term action levels for the roadway excavation scenario are 9.6 $\mu\text{g}/\text{m}^3$, 320 $\mu\text{g}/\text{m}^3$, and 40 $\mu\text{g}/\text{L}$ for air, soil gas, and groundwater, respectively.

The calculated excavation air REL for TCE is 18 $\mu\text{g}/\text{m}^3$, which exceeds the short-term action level of 9.6 $\mu\text{g}/\text{m}^3$, so it was adjusted down to the short-term action level. The soil gas and groundwater RELs were also adjusted down accordingly.

Table 3. Roadway Excavation RELs

Chemical	Air ($\mu\text{g}/\text{m}^3$)	Soil Gas ($\mu\text{g}/\text{m}^3$)	Groundwater ($\mu\text{g}/\text{L}$)
PCE	290	9,700	760
TCE	9.6	320	40
cis-1,2-DCE	1,000	33,000	10,000
trans-1,2-DCE	1,000	33,000	4,200
Vinyl chloride	8.4	280	9.9
Benzene	9.6	320	72
Toluene	120,000	4,000,000	800,000
Ethylbenzene	25,000	830,000	150,000
Total xylenes	2,500	83,000	18,000

Adjustments for Additive Risk

As discussed for the commercial RELs, if either of the following combinations of chemicals are COCs for the site, the air RELs should be adjusted as described in this section:

- TCE and ethylbenzene
- PCE, toluene, and xylenes or any two of these chemicals.

After the air RELs are adjusted, the soil gas and groundwater RELs will need to be recalculated. Work with a risk assessor to ensure these adjustments are performed correctly.

The cancer risks and noncancer hazards for the roadway excavation RELs are the same as for the commercial RELs except that the cancer risk and noncancer hazard for TCE are 5×10^{-7} and 0.19,

ATTACHMENT D

Right-of-Way Worker Risk Evaluation

Soil Exposure Assumptions and Cleanup Levels for Worker in Right-of-Way

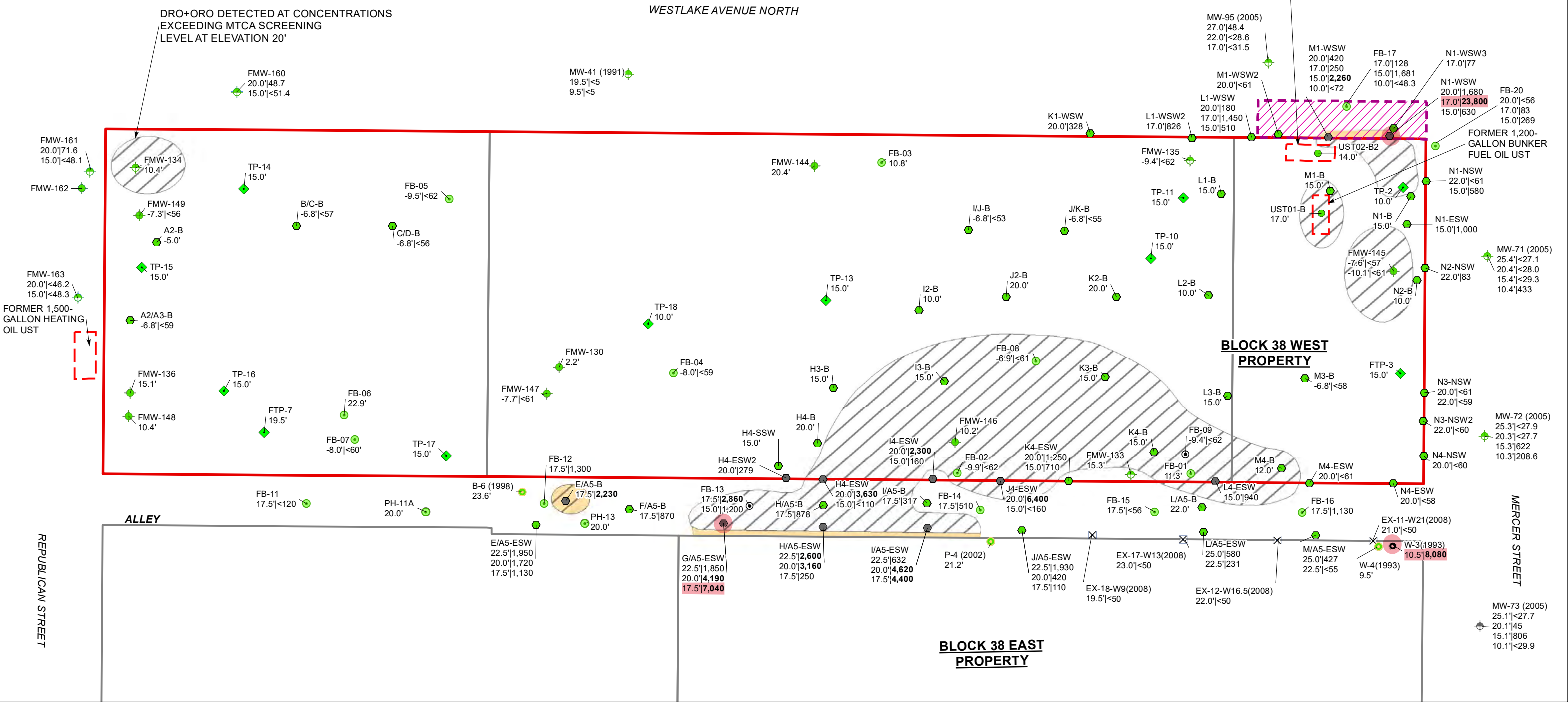
Parameter	Standard Method B ^a	Standard Method C ^b	Right-of-Way Worker Scenarios				Units
			A	B	C	D	
Average body weight (ABW)	16	70	70 ^b	70 ^b	70 ^b	70 ^b	kg
Soil ingestion rate (SIR)	200	50	50 ^b	50 ^b	50 ^b	50 ^b	mg/day
Exposure frequency (EF)	1	0.4	0.2 ^c	0.2 ^c	0.2 ^c	0.2 ^c	unitless
Exposure duration (ED)	6	20	25 ^d	25 ^d	25 ^d	25 ^d	years
Target cancer risk (RISK)	1E-06	1E-05	1.E-05 ^b	1.E-05 ^b	1.E-06 ^a	1.E-06 ^a	unitless
Portion of time working in contaminated soil	100%	100%	20%	100%	20%	100%	unitless
Cleanup level for cPAH TEQ	0.19	130	1,050	210	105	21	mg/kg
Cleanup level for DRO+ORO	2,000 ^e	29,000 ^f	232,000 ^g	46,400 ^g	23,200 ^g	4,640 ^g	mg/kg

Notes:

- a. Standard Method B values from MTCA Equations 740-1 and 740-2 unless otherwise noted.
- b. Standard Method C values from MTCA Equations 745-1 and 745-2 unless otherwise noted.
- c. Exposure frequency for each scenario is based on working 35 hours per week, 50 weeks per year.
- d. Exposure duration is based on a commercial worker scenario used in Ecology's [Cleanup Levels and Risk Calculation \(CLARC\) vapor intrusion commercial worker guidance \(July 2022\)](#).¹²
- e. Based on MTCA Method A since there is no calculated Method B cleanup level value for total DRO+ORO.
- f. Based on direct contact; calculated using Ecology's MTCATPH spreadsheet tool and a default composition for diesel.
- g. Based on calculated value of 29,000 mg/kg (Note f) and adjusted for exposure frequency, exposure duration, and portion of time working in contaminated soil for each scenario.

¹² https://fortress.wa.gov/ecy/ezshare/tcp/CLARC/GUIDANCE_VaporIntrusionScreeningLevels-Workers.pdf

Red-highlighted values are total DRO+ORO concentrations exceeding the most conservative risk-based level protective of ROW workers (4,640 mg/kg).



LEGEND

- SHALLOW WATER-BEARING ZONE MONITORING WELL
- INTERMEDIATE WATER-BEARING ZONE MONITORING WELL / OBSERVATION WELL
- DECOMMISSIONED SHALLOW WATER-BEARING ZONE MONITORING WELL
- DECOMMISSIONED INTERMEDIATE WATER-BEARING ZONE MONITORING WELL
- BORING (FARALLON)
- BORING (GEOENGINEERS)
- EXCAVATION SAMPLE (GEOENGINEERS)
- POT HOLE (FARALLON)
- UST SAMPLE LOCATION (FARALLON)
- EXCAVATION SAMPLE LOCATION (FARALLON)
- TEST PIT (FARALLON)

- DENOTES SAMPLE LOCATION AND ELEVATION IN FEET NAVD88 WHERE DRO+ORO RESULTS ARE LESS THAN THE CLEANUP LEVEL
- ESTIMATED EXTENT OF SOIL EXCEEDING THE CLEANUP LEVEL REMAINING IN PLACE POST INTERIM ACTIONS OR INACCESSIBLE DUE TO EXISTING UTILITY BANK
- ESTIMATED EXTENT OF SOIL EXCEEDING THE SCREENING LEVEL THAT WAS EXCAVATED AND REMOVED BY INTERIM ACTIONS
- MECHANICAL EQUIPMENT AREA DECOMMISSIONED AND FILLED WITH CDF
- PROPERTY BOUNDARY
- FORMER UNDERGROUND STORAGE TANKS (USTs)

KING COUNTY PARCEL BOUNDARY

NOTES:
DATA SHOWN ARE FOR SAMPLES COLLECTED BETWEEN 2014 THROUGH 2023 UNLESS OTHERWISE NOTED.
DATA IS ONLY SHOWN FOR PERFORMANCE AND COMPLIANCE SAMPLES THAT REMAIN IN PLACE. NO SOIL DATA STRINGS ARE SHOWN FOR SAMPLES THAT WERE REMOVED.
FOR SOIL SAMPLES:
ELEVATION IN FEET NAVD88 | DRO+ORO ANALYTICAL RESULTS IN MILLIGRAMS PER KILOGRAM (mg/kg)
BOLD = DENOTES CONCENTRATIONS THAT EXCEED THE SOIL CLEANUP LEVEL OF 2,000 mg/kg
< = DENOTES ANALYTE NOT DETECTED AT OR EXCEEDING THE REPORTING LIMIT LISTED
CDF = CONTROLLED DENSITY FILL
DRO = TOTAL PETROLEUM HYDROCARBONS (TPH) AS DIESEL-RANGE ORGANICS
ORO = TPH AS OIL-RANGE ORGANICS
MTCA = WASHINGTON STATE MODEL TOXICS CONTROL ACT CLEANUP REGULATION
NAVD88 = NORTH AMERICAN VERTICAL DATUM OF 1988

ALL LOCATIONS ARE APPROXIMATE.
FIGURES WERE PRODUCED IN COLOR. GRAYSCALE COPIES MAY NOT REPRODUCE ALL ORIGINAL INFORMATION.

Washington
Issaquah | Bellingham | Seattle

Oregon
Portland | Baker City

California
Oakland | Irvine

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Your Challenges. Our Priority. | farallonconsulting.com

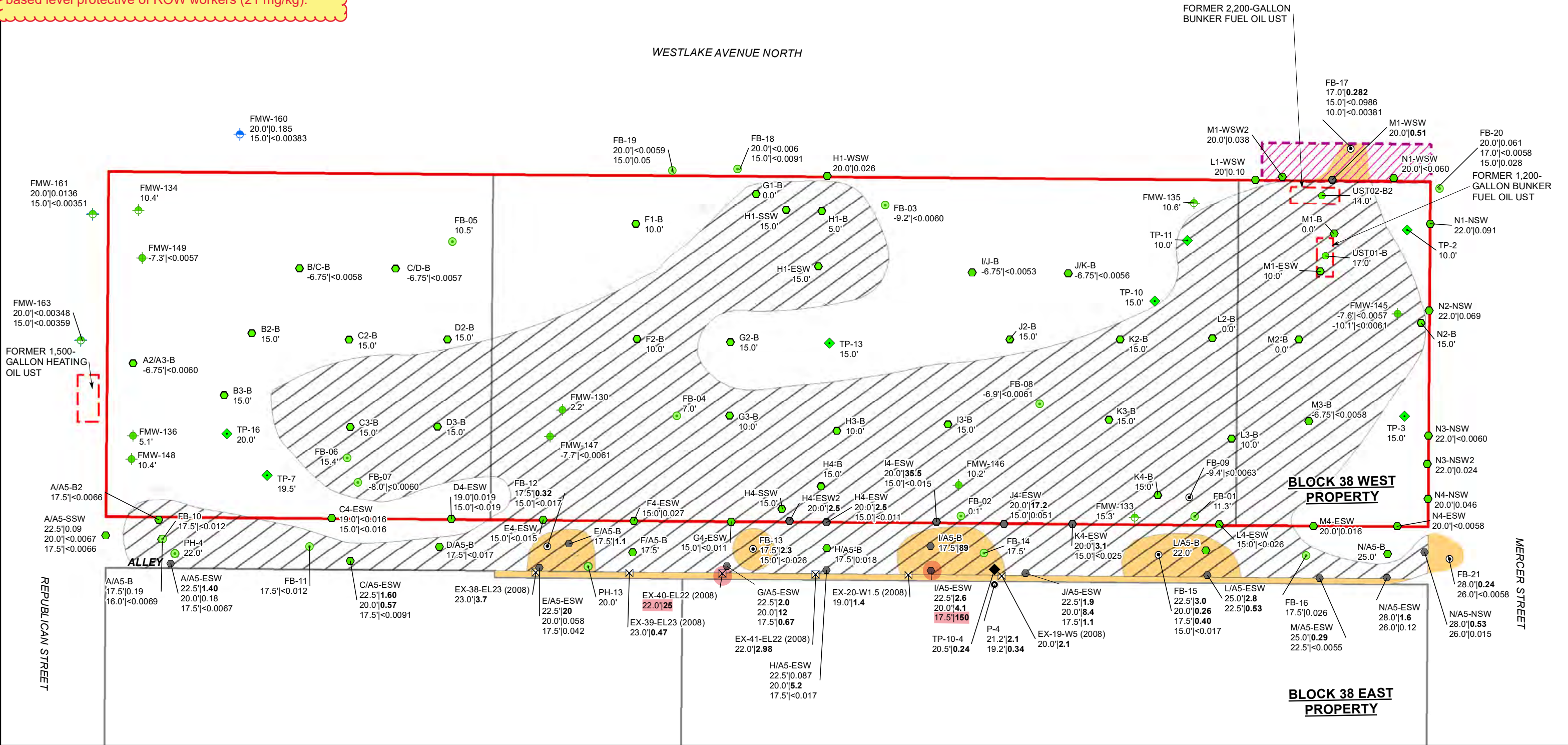
Drawn By: jones

FIGURE 7
POST INTERIM ACTION
SOIL ANALYTICAL RESULTS
FOR DRO + ORO
BLOCK 38 WEST SITE
SEATTLE, WASHINGTON
FARALLON PN: 397-019

Date: 8/2/2024
Checked By: JW
Document Path: Q:\Projects\397_VULCAN\019_Block38\Mapfiles\17F_2024\Figure-07_PIA_Soil-DRO+ORO.mxd

Disc Reference:

Red-highlighted values are cPAH (total toxic equivalent) concentrations exceeding the most conservative risk-based level protective of ROW workers (21 mg/kg).



LEGEND

- SHALLOW WATER-BEARING ZONE MONITORING WELL
- DECOMMISSIONED SHALLOW WATER-BEARING ZONE MONITORING WELL
- DECOMMISSIONED INTERMEDIATE WATER-BEARING ZONE MONITORING WELL
- BORING (FARALLON)
- BORING (GEOENGINEERS)
- EXCAVATION SAMPLE (GEOENGINEERS)
- TEST PIT (GEOENGINEERS)
- POTHOLE (FARALLON)
- UST SAMPLE LOCATION (FARALLON)
- EXCAVATION SAMPLE LOCATION (FARALLON)
- TEST PIT (FARALLON)

- DENOTES SAMPLE LOCATION AND ELEVATION IN FEET NAVD88 WHERE cPAHs RESULTS ARE LESS THAN THE CLEANUP LEVEL
- ESTIMATED EXTENT OF SOIL EXCEEDING THE CLEANUP LEVEL REMAINING IN PLACE POST INTERIM ACTIONS OR INACCESSIBLE DUE TO EXISTING UTILITY BANK
- ESTIMATED EXTENT OF SOIL EXCEEDING THE SCREENING LEVEL THAT WAS EXCAVATED AND REMOVED BY INTERIM ACTIONS
- MECHANICAL EQUIPMENT AREA DECOMMISSIONED AND FILLED WITH CDF
- PROPERTY BOUNDARY
- FORMER UNDERGROUND STORAGE TANKS (USTs)
- KING COUNTY PARCEL BOUNDARY

NOTES:
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DATA IS ONLY SHOWN FOR PERFORMANCE AND COMPLIANCE SAMPLES THAT REMAIN IN PLACE. NO SOIL DATA STRINGS ARE SHOWN FOR SAMPLES THAT WERE REMOVED.

FOR SOIL SAMPLES:
DEPTH AND CONCENTRATIONS REPORTED AS:
ELEVATION IN FEET NAVD88 | cPAH TEC
ANALYTICAL RESULTS IN MILLIGRAMS PER KILOGRAM (mg/kg)

BOLD = DENOTES ELEVATION AND CONCENTRATIONS THAT EXCEED THE CLEANUP LEVEL OF 0.19 mg/kg
< = DENOTES ANALYTE NOT DETECTED AT OR EXCEEDING THE REPORTING LIMIT LISTED FOR TOTAL TOXIC EQUIVALENT CONCENTRATION OF BENZO(A)PYRENE (mg/kg)
CDF = CONTROLLED DENSITY FILL
cPAHs = CARCINOGENIC POLYCYCLIC AROMATIC HYDROCARBONS
TEC = TOXIC EQUIVALENT CONCENTRATION OF BENZO(A)PYRENE FOR cPAH MIXTURE
MTCA = WASHINGTON STATE MODEL TOXICS CONTROL ACT
CLEANUP REGULATION
NAVD88 = NORTH AMERICAN VERTICAL DATUM OF 1988

ALL LOCATIONS ARE APPROXIMATE.
FIGURES WERE PRODUCED IN COLOR. GRAYSCALE COPIES MAY NOT REPRODUCE ALL ORIGINAL INFORMATION.



FIGURE 8
POST INTERIM ACTION
SOIL ANALYTICAL RESULTS
FOR cPAH TEC
BLOCK 38 WEST SITE
SEATTLE, WASHINGTON
FARALLON PN: 397-019

Drawn By: jones Checked By: JW Date: 8/2/2024 Disc Reference: O:\Projects\397 VULCAN\019_Block38\Mapfiles\17F_2024\Figure-08_Soil-cPAHs.mxd